Track Finder Crate, Backplane and Parts

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Track Finder Backplane

Standard VME 64x J1/P1 backplane

These SRSP feedthru connectors are for DT information exchange via transition board.

Track Finder production readiness review, Rice, August 2004

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Backplane corrections

- 80 MHz clock lines to three MPC slots
Power consumption

- Based on very conservative calculations
  - Each Sector Processor:
    - 21.5A @ 3.3V
    - 3A @ 5V
  - Crate (safety factor 1.5):
    - 400A @ 3.3V
    - 60A @ 5V
  - Total maximum power: ~1620 W

- Power consumption will be thoroughly measured before crate is ordered
Track Finder Crate

- W-IE-NE-R 9U crate
- Standard VME-64X J1 section
- Custom J2 and J3 sections
- Power supply
  - 6U box (10 modules max)
  - 4 MEH modules (115A each) @ 3.3V
  - 1 MEH module @ 5V
  - ±12 and –5 V if necessary
  - Input: 115 or 220V (selectable)
Track Finder Crate

• Cooling:
  – Most powerful fan tray
    • 6020/4 type
    • 1500 m^3/hr
  – Temperature sensors on top of the crate
    • Two threshold temperatures
    • First switches fans to maximum RPM
    • Second turns off power
Track Finder Crate spare parts

- 1 Power supply box, 6U (without power modules)
- 2 MEH power modules (2-7V, 115A)
- 1 J1 standard VME64X backplane
- 1 Fan tray, 6020/4, intelligent
Track Finder Rack

• Rack requirements:
  – Power outlets (220V, 50 Hz, 15A)
  – Front and Back door with locks, to protect optical cables
  – Cable strain relieves on front and back of TF crate. Probably need to be custom-designed by us.
  – The rest is according to Rack Wizard
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Entry in Rack Wizard for TF crate was done a few months ago

Currently, message from Rack Wizard is:

This version of Rack Wizard is no longer supported.
Please use the link below:
https://oraweb.cern.ch/pls/cmsintegration/docs/EDMH.html

…and this link does not work…
Control computer and VME controller

- 1 computer + 1 spare
- 1 VME controller + 1 spare
- Computer and controller can be purchased later on. We have everything to run tests now.
Parts procurement

- All parts are available within 4-6 weeks delivery time, except optical links
- Optical links FTRJ-8519-1-2.5 are obsolete
- Need ~500 pcs (SP+MPC)
- Found and ordered 409 pcs
- Drop-in replacement part is FTRJ8519F1GNL
- If the rest of original part could not be found, replacement part has to be tested before ordering
- All other parts will be ordered soon.